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27 March 1980

USSR Report

MILITARY AFFAIRS

No. 1507

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NAVAL TRAINING: SUBMARINE CREW POLITICAL INDOCTRINATION

Moscow AGITATOR ARMII I FLOTA in Russian No 23, Dec 79 signed to press 28 Nov 79 pp 4-5

[Article by Capt Med Serv E. Nikitin, secretary of the ship's political organization: "Taking the Situation into Consideration"]

[Text] A combat training area. A submarine is at assigned depth. "Silent operation" is observed. According to reconaissance data, a detachment of "enemy" ships should move into this area with a combat escort. It is necessary to detect and destroy the flagship. The first word is from the sonarmen.

On watch is P.O. 2d Class Nikolai Samorodov, specialist 1st Class, section commander agitator.

Several dots appear on the sonar screen.

The command of the watch officer, "Define the main targets," Comes next.

Agonizing minutes pass, and finally the voice of P.O. 2d Class Samorodov is heard:

"Bearing...degrees. I assume it is the 'enemy' cruiser."

The torpedomen complete the work started by the sonarmen. The training mission has been fulfilled successfully. The torpedo had passed under the keel of the flagship.

On the submarine, P.O. 2d Class Samorodov became a Komsomol activist and a member of the CPSU. On the long cruise he was charged with carrying out the duties of division agitator.

The specific character of long submarine cruises is such that all mass agitation work is conducted by watch sections. Thus, the agitators of the sections and divisions play an important role on the cruise They render substantial assistance to the officers, warrant officers and petty officers in the mobilization of the sailors in the irreproachable fulfillment of the task assigned to the ship's crew.

Young communist Samorodov acted precisely thus during the last cruise. He invariably informed division personnel concerning our country's life and concerning the sailor's tasks in each specific period of the cruise. He exerted every effort to nurture in the submariners a burning hatred for the imperialists and an intolerance toward the bourgeois ideology. He explained the aggressive nature of the very and powerful, hegemonistic policies of the present Bei'jing leadership and the necessity of the highest vigilance.

From where did the agitator take the material for conducting the lecture? The collection of books which the communist made up, with the help of the political worker, before going to sea was of great help in his work.

Agitator Samorodov worked on his own initiative during the cruise He issued the bulletins, "the telegrams of TASS report." The activist made skillful use of the radio recordings "the latest news" in his meetings, devoted to the successes of the Soviet people in the fourth year of the 10th Five-Year Plan, to the extensive socialist competition of the worthy reception of the 110th anniversary of V.I. Lenin's birth and to other important events in the country.

The "lightning"-leaflets concerning notable events on the cruise, which the agitator had issued, were read with great interest.

When the ship has been at sea a long time, the conditions for the exploitation of techniques change. Emphasis on special training is made in the sailors' study of the practical aspects of management. With this goal for the most rational use of time by the study of his own specialty, each seaman and petty officer receives individual tasks according to the level of training. Taking into account this feature in the special study, agitator P.O. 2d Class Samorodov drew up his work with the different categories of sailors. He paid much attention to raising the professional mastery of the petty officers and non-rated personnel, helped the sailors catalog their technical skills competently to exploit the techniques. The experienced specialist continually complicated the training sessions, taught his comrades to eliminate standard malfunctions in the apparatus and to operate with precision in bad weather.

The agitator not only looked after the combat training of the specialists of the radio-technical service. He often went to the torpedomen. He was interested in how they mastered the standards and how they struggled to shorten them. The agitator reasoned thus: What is the use of the sonarmen quickly detecting the target at the maximum range, if the torpedomen are unable to make the weapon ready for firing in a timely manner.

Through the agitator's initiative, joint raids of the Komsomol activists of two subunits were conducted by battle stations. This helped to reveal problem areas in the activities and make maximal use of the combat potentials of the sonarmen and torpedomen.

When the ship had returned from the long cruise, I became interested in P.O. 2d Class Samorodov.

"What turned out to be the most complicated, difficult responsibility during the cruise?"

"You know," the petty officer answered, "there were few difficulties. Such moments occurred, where, within the range of our sonar, up to 10 or more ships appeared. And, you know, it was necessary to designate not only all targets, but also to distinguish from them the important ones. Thus, it was, in particular, when the ship executed a torpedo firing."

"With navymen like our agitator, it is easy to take the watch,"--having heard what we were conversing with Samorodov about, quipped the Watch Officer, Capt Lt L. Falaleev.

"I had heard the petty officer, the opinion of him of the commander and his fellow servicemen and was convinced that Nikolai Samorodov knew how to find his place in the general system. He works well by himself, and others learn that quality from him."

Immediately after the submarine returned from the cruise, P.O. 1st Class Samorodov (he was awarded the next higher rank) found himself mentioned by name in a report signed by the Captain. He decided to remain to serve in the submarines. The command headquarters of the formation assigned P.O. 1st Class Nikolai Samorodov to study in the School for Navy and Army Warrant Officers.

9355
CSO: 1801

MILITARY BENEFITS: PENSION PROVISIONS EXPLAINED

Moscow AGITATOR ARMII I FLOTA in Russian No 23, Dec 79 signed to press 28 Nov 79 pp 30-32

[Editorial: "New Guarantees"]

> [Text] After the publication of the decree of the CC CPSU and the USSR Council of Ministers, "On the Measures for Material Stimulation of Work of Pensioners in the National Economy," the editors received letters requesting greater details concerning the material incentives for service pensioners who have continued to work in the national economy.
>
> We are publishing the advice of the deputy Chief of the Central Finances Department of the Ministry of Defense, USSR Gen Maj Intend Serv A. Kotlyar.

The decree of the CC, CPSU and the USSR Council of Ministers, "On the Measures for Material Stimulation of Work for Pensioners in the National Economy," is a new manifestation of the concern of the Communist party and the Soviet state concerning the veterans of labor. With a view toward the further expansion of the utilization of pensioners' labor in the national economy, especially in the production sphere, in the enterprises and in the organizations for service to the population, a number of supplementary measures are outlined, including the payment of the old-age pension to working pensioners on favorable terms (50, 75 and 100 percent of the scheduled pension).

The enumeration of categories of workers using the right to receive a pension in the full amount, irrespective of earnings, within the limit of 300 rubles per month, together with wages and within the limits of 50 percent; and in the Ural, Siberian and Far East rayons--75 percent of the old age pension is confirmed.

To all categories of workers, irrespective of the place of work for whom the pension together with wages does not exceed 150 rubles per month, payment of the pension is authorized in the full amount.

The decree stipulates, in particular, that the pension for long-service is to be paid in full to working service pensioners under the procedure established for old-age pensioners if they do not have the right to receive a pension at the highest scale.

It is important to note that even all the earlier decisions adopted by the CC CPSU and the USSR Council of Ministers regulating the procedures for the payment of pensions to working pensioners, including service retirees, remain fully in force.

As is well-known, in accordance with effective legislation for service pensioners who have gone to work, a pension is paid in full in such an amount that the pension and the wages being received do not exceed, in aggregate, the total of the monetary salary from which the pension was taken. In the case of pensioners from the Officer Corps the rated increase for long-service, which has been paid in full to the day of discharge, is included.

If earnings and pensions taken together exceed the stated total of monetary salary, the size of the prescribed pension is reduced by the sum which exceeds this monetary salary. However, for the pensioner the reduction is not less than 50 percent of the prescribed pension in all cases.

The decree of the CC CPSU and the USSR Council of Ministers, which established the new privileges for working pensioners, significantly broadens the contingent of service pensioners interested in professional work activity.

For greater clarity we give such an example. After discharge from the Army a serviceman with extended service (with a base monetary salary of 196 rubles) was granted a pension for 25 years of service at a rate of 98 rubles per month. In the case of a larger salary the scale of the paid-up pension was correspondingly reduced, but after his departure, no less than 50 percent of the pension was preserved for him, i.e., 49 rubles per month.

With the introduction of the new procedure of payment of a pension, the indicated pensioner, under similar conditions, will be able to receive a pension at the designated rate (98 rubles); with earnings of up to 202 rubles per month (300-98 + 202 rubles).

All working service pensioners, whose total rate of pay, taken into consideration at the time of pension, is less than 300 and 150 rubles respectively, will be in a similar position.

The decree of the CC CPSU and the USSR Council of Ministers, "On the Material Stimulus for Work in the National Economy," is effective 1 January 1980. From this date payments of pensions to working pensioners must be made

according to the new terms. Therefore, it is necessary to establish which of the pensioners included in the calculation receiving pensions for long-service, will fall under the action of the indicated decree. In particular, for the payment of a pension along with a wage, data must be more defined as to where and in what job the pensioner is working.

Keeping in mind that service pensioners are paid in full through institutions of the State Bank organs of local military departments which grant pensions are obligated, in respect to each working pensioner, to send to the corresponding State Bank institution instructions concerning the procedures for paying the pension. Regarding the old-age pensioners who are working in organizations and enterprises of the USSR Ministry of Defense: payment to them of a pension from 1 January 1980, in accordance with the decree of the CC CPSU and the USSR Council of Ministers, will be carried out by place of work on the basis of the missions of the organs of social service.

The duty of all personnel of the financial-pension organs is to exhibit a responsive attitude toward the veterans and to provide realization of the decree of the CC CPSU and the USSR Council of Ministers on the measures for the material stimulation of work of the pensioner in the national economy.

9395
CSO: 1801

TOLUBKO ON TASKS OF COUNTRY'S ARMED FORCES

LD051235 Moscow TRUD in Russian 23 Feb 80 p 3 LD

[Army General V. F. Tolubko commander of the Strategic Missile Forces and USSR deputy defense minister, answers TRUD editorial questions under the rubric "Today Is Soviet Army and USSR Navy Day": "Soldiers of the Motherland"]

[Excerpt] [Question] What are the distinguishing features of Soviet Armed Forces' building at the present stage?

[Answer] Having finished the war with an historic victory of worldwide significance, the Soviet people embarked on peaceful labor to restore the shattered economy. Socialist building, the healing of the war's grave wounds, continued under conditions of a further increase in the aggressiveness of international imperialism. The reactionary forces could not reconcile themselves to the triumph of the socialist revolutions in a number of European and Asian countries, to the upsurge of the international working-class movement or to the collapse of the system of colonial oppression. In the imperialist countries there unfolded an unprecedented arms race and a feverish cobbling together of aggressive anti-Soviet blocs.

Faced with a direct military threat, the CPSU and Soviet state adopted resolute measures to strengthen the USSR's Armed Forces. The further growth of the country's economic potential, the process of the scientific-technical revolution and the Soviet people's tremendous sociopolitical achievements made it possible in a short time to create nuclear weapons together with means of delivering them and also to equip the army and navy with these weapons. In the fifties, the Soviet Armed Forces entered a qualitatively new stage of development--the stage of fundamental transformations in all military spheres. The formation of the Strategic Missile Forces, which celebrated their 20th anniversary in December of last year, was the most vivid expression of the profound qualitative transformations in military matters. They now have automated missile complexes at their disposal and are in a state of constant combat readiness, capable at any moment and under any conditions to fulfill their combat task of defending our homeland and the other socialist community countries.

All branches of the armed forces and categories of troops are being harmoniously developed and improved along with the Strategic Missile Forces in the country's defense system. In the postwar years the combat potential of the ground forces, the country's air defense forces, the air force and the navy have grown immeasurably.

The Soviet Armed Forces possess remarkable, highly-qualified commanders and political and engineering cadres. Today more than 90 percent of the officers are communists and Komsomol members, more than half have higher military or military-specialist training. In certain branches of the Armed Forces these indicators are even higher. For example, the overwhelming majority of officers in the missile forces have received a higher education. Year by year the general educational standard of soldiers and sergeants increases.

Together with the development and improvement of the Soviet Armed Forces, the might of the entire combat community of the Warsaw Pact armies is growing.

[Question] In the imperialist countries there is no end to the stockpiling of weapons, the growth in military budgets and the elaboration of new and increasingly destructive means of warfare. The world is not insured against the imperialist military adventures. What are the Soviet Armed Forces' tasks under these conditions?

[Answer] The consistent and persistent struggle of the Soviet Union and the other socialist countries for international security has made it possible to secure an appreciable improvement in the international political climate and to break the tragic cycle where peace proved to be only a brief respite between world wars. However, the world situation has become appreciably more complex at the end of the seventies and beginning of the eighties.

When answering a PRAVDA correspondent's questions, Comrade L. I. Brezhnev, general secretary of the CPSU Central Committee and chairman of the USSR Supreme Soviet Presidium, said: "...the peoples must know the truth--who is responsible for this. I shall answer unreservedly--the blame lies with the imperialist forces, and especially with certain U.S. circles, with those who see the relaxation of tension as an obstacle to their aggressive schemes, to the kindling of the militarist psychosis and to interference in the internal affairs of other peoples, with those who have the deep-seated habit of behaving unceremoniously with other states and acting in the international arena as though they have a completely free hand."
U.S. President J. Carter's "State of the Union" message to Congress and his Congress address which were imbued with the "cold war" spirit represent a new claim for American world "domination."

Active military preparations are being undertaken in the United States and the other NATO countries. For example, in 1979 the United States spent more than $130 billion for military purposes, $141.2 billion have already

been appropriated for 1980, and more than $160 billion are planned for 1981, or more than 25 percent of the country's entire budget. Carter states that his administration will increase the country's military budget in real terms by more than 5 percent each year. Under U.S. pressure, NATO decided in December 1979 to deploy in West Europe a further 600 or so medium-range nuclear missiles targeted against the USSR and its allies. The numerical strength of the NATO bloc's armed forces is being increased. A real alliance between the United States and China is being cobbled together on the basis of "a coincidence of strategic interests," as U.S. and Chinese politicians state.

Under these conditions, the CPSU and Soviet Government are compelled to take the necessary measures to maintain our state's defensive potential and the combat might of the USSR's Armed Forces at the proper level. Each potential aggressor must clearly realize that in the event of an attack on the USSR and other friendly countries we will meet with a shattering retaliatory strike. The Soviet servicemen have a profound grasp of the complexity and contradictory nature of the contemporary international situation, and, in fulfilling their patriotic and internationalist duty in defense of the gains of socialism, they are tirelessly increasing their military preparedness and their military skill. They are striking to mark 1980, the year of the 110th anniversary of Lenin's birth, the 35th anniversary of victory in the Great Patriotic War, and the year of active preparation for the 26th CPSU Congress, with new successes in military and political training. The Soviet people can be confident that its armed forces are a trusty shield for our great homeland and for the whole socialist community.

CSO: 1801

NAVAL TRAINING: ON AN AIR-CUSHION LAND SHIP

Moscow PRAVDA in Russian 10 Jan 80 p 6

[Article by N. Cherkashin, special PRAVDA correspondent, twice awarded Red Banner Baltic Fleet]

[Text] We Serve the Soviet Union!

The concrete surface of the landing area runs into the smooth shore of the sea: Some strange ships, with a black attachment where the waterline is usually located, with aircraft keels and air screws on the stern stood stock still on the slabs.

One stands alongside and guesses: Is this a ship? On the outside it is an aircraft with folded wings, but on the port bow hangs a small anchor. On the tripod masts blue and white navy flags flutter. These are air-cushion landing ships. Abbreviated--KVP. On the navigation bridge the "generic" crests of landing ships is depicted: from the opened landing ramps a tank swims out. To the traditional crest aviation wings are added. A substantial addition. The KVP's have speed and are, in reality, aircraft.

"Ships of the Soviet fleet and their weapons," noted the navy's commander-in-chief, Fleet Admiral S. Gorshkov, "constitute a new and original direction in the development of the fleets of the world." While examining the KVP and the sharp blades of their air screws one involuntarily recalls these words.

The main weapon of any landing--tank, airborne or naval--is surprise. But the landing detachment accompanying the ship convoys is not brand new.

Usually the course and speed and, most likely, the landing area are known to the enemy. It is a different matter when nimble air-cushion ships fly swiftly above the sea.

A clear slogan blazed above the barracks: "Men of the amphibous forces! Let us strive for the title of outstanding sub-unit for the 14th time! Guards Lt A. Kartukov--in a dappled camouflage cloak and helmet of the color of shipboard armor--supervised the loading of the landing force. Kartukov has a favorite saying: All that is bold, quick and beautiful--"That is the amphibious force!" All that is not such--"that is not the amphibious force!" Just as always the amphibious force will come out on top. Tall machinegunners with Guards' moustaches clattered on the deck, deftly jumped through the ship's hatch marked with the large figure "THREE". The commander of the "TROIKA", Sr Lt Sergey Delyusin, observed the stationing of the landing force through the scuttle in the deck of the navigation bridge.

"Prepare the ship for battle and getting underway!"

It would have been more precise to say "for battle and take off." The col warmup of the main engines' screws had already begun. Sergey put on a leather interphone headset--the same kind his father, a pilot in Long-Range Aviation, used to carry. The helm in front of him is just like an airplane's--two-horned. The captain of the KVP, just as the captain of an airship, holds the helm himself.

To the right of Delyusin, having pushed the headphones onto his temples, sits the commander of the electromechanical division, Sr Lt-Eng V. Kopytenkov. That's who is really Delyusin's right hand. If it were Sergey's fate to transfer to another ship, he would want to go only with Valerie. They have worked together, sailed together, flown together.

In front of the engineer-mechanic is an elegant panel: a multicolored display panel, a graphic panel; little lights inform, warn and remind. Delicate fingers confidently move rapidly from switch to switch and the huge machine unwillingly comes to life after the night's layover. And then the air screw begins to roar. The ship's wide bow lifts itself a little and finds itself even with the crest of the barrack's roof; from the conning tower porthole a view is revealed as from the bridge of the best cruiser. Delyusin pushes the reverse lever and the bulky and cumbersome ship begins to swim to the place where the concrete slab imperceptibly becomes the sea. Water wings shoot up along the sides and we are carried over the waves toward the harbor exit.

This has something of a sailboat about it, this air-cushio ship. Flexible, the vehicle handles well on its black rubber sail. Only it is not necessary to scrape the mast with a fingernail as in older days when one was at the mercy of the winds. We ourselves carry it with us and the vortices which have been created under the bottom of the KVP are as one with the storm squalls of the Baltic Sea.

After graduating from the higher naval school, Delyusin wanted to go into submarines. But he found himself in a KVP. Unexpectedly, he did not even suspect that there were such ships already in the fleet. He found himself there and does not regret it one bit. In order to understand, one needs only to glance at how Sergey has now become one with the helm and with what intensity he scrutinizes the glass covered instrument. He bites his lip. His ears turn red like a boy's. His feet are braced far apart. The excitement of flight does not affect his concentration and his collectiveness. One can dig the bow of this vehicle into a wave at a speed that would cause a racing car to turn over. Keep your eyes open, captain?

Yesterday, Delyusin recounted a curious event. The fleet finance officer, having put the crew's sea pay in order and trying to grasp the meaning of an excerpt from the logbook, picked up the phone: "I have served for 20 years in the fleet and for 20 years all the excerpts have begun with the words, 'Cast off the moving lines', but you have cast off from a platform. Are you crazy or something? Thank God our ships don't fly yet." But they do.

The navigator on such a ship does not need "to highlight" "shoals" on the chart; that is, to mark with a red pencil sandbars and other dangerous places. It is not necessary to keep an eye on the depth. That is why on the navigation bridge one does not find a fathometer--a navigational attribute of any sea-going ship. The KVP is a surface ship in the literal sense of the word. It is afraid of neither mine fields nor torpedoes.

Meterologist seaman V. Milashenko has forced his face into the rubber tube of the radar; his blond forelock, hanging down moves back and forth with the rolling like the needle of an inclinometer.

The leader of the ordnance electrician section, P.O. 1st Class A. Chernokolsky, readies the rapid-fire cannon for battle. Before entering the navy, he worked as an engineer technologist on a Sovkhoz. In the small, but multi-national crew the Zaporozh'ye, Bulgarians are represented in the person of the secretary of the Komsomol organization. Delyusin does not dote on him. "By the level of preparedness, he is a ready officer. He has the ability to work with people, he is a born political worker." He half-jokingly, half-seriously calls him "The Komsomol Commissar."

I move to the landing force compartment. The naval infantry now differs little from the parachutists in the troop space of a transport aircraft. Some nestle down under the rumbling turbines, not letting their weapons out of their hands; others from time to time look out the little port-holes--has the beach appeared? Still others are working over a cardboard box of rations. My acquaintance, Guards Lt Kartukov is busy with that.

"The sea loves the strong," he winks.

Kartukov offers me a little can containing a "tourist's breakfast,"--hardtack, chocolate.

"I was born in the center of the country, in Karzakhstan," recounts Aleksandr, "studied in the Far East at the Blagoveshchenskiy higher school, but I serve in the East..."

Naturally, the conversation turned to the kind of events that will be occurring during disembarkation. A landing is a landing and if the "enemy" fire is conducted with blank cartridges then the strikes of the waves of naval infantry will not top the scales. Once in large exercises it was necessary to disembark as in battle, regardless of the weather. Dozens of machines came off the ramp onto the beach and one tank took on water and went to the bottom. The crew came to the surface. They began to salvage the machine. In order to pull it out by tug, it was necessary to shift the controls to the neutral position, and here, Maj V. Morev dove three times into the icy water. Taking a deep breath, he wormed himself into the sunken tank through the turret hatch, made his way to the farthest corner--to the mechanic driver's position and attempted to disengage the transmission. He was successful on the third try. The tank was salvaged, the cylinders flushed and the revitalized machine rushed into battle.

"That is the amphibious force!" Kartukov concludes, not without pride.

Warrant boatswain A. Efimov strictly peeped into the landing force compartment:

"Here is a plastic bag for you. I don't want a single food tin left lying about the deck!"

An unnecessary warning: Even without it, these naval infantrymen understand "sea manners." They wear little gold anchors on their sleeves for good reason.

We go with the boatswain through the ship to the wardroom with the television screwed to the bulkhead, the cabins of the officers and warrant officers, the crews' quarters and the galley. In a pot, a dark naval compote is splashing and in the sink plates are drying. For the moment one forgets that all this is rushing along over the sea with tremendous speed.

"And who is your cook?"

"We all take turn! The crew is small. Each possesses two or three professions."

By means of a steep ladder, I climb up to the navigation bridge. And in time. The navigator, Lt V. Nazarenko, is distracted from the chart.

"Comrade Captain, in 4 minutes we will be approaching the place of disembarkation."

"Meterologist, what is the distance to the beach?"

"A cable length." [185.2m]

Delyusin rammed the throat microphone under his cheekbone: "The ship is at the landing place, prepare the landing force!"

A sea battle is transient. Now, with the appearance of missiles in the fleet, deck-loaded aircraft and air-cushion ships, it is a somewhat obsolete formula. The sea battle is lightning-fast.

The yellow shoreline approaches swiftly. The crew instinctively grasp the handrail for support as if to await a shock, and the scraping of a torn bottom. The "TROIKA" flies out of the water. The yellow heads of grass are noticed in the water, revealing for a moment a dark watery trough. The undergrowth and acacia pass under the bottom, like a living prickly wire. Here is a suitable underwater meadow.

"Drop the RPM's".

The ship plops down--for a smooth landing--there are no extra seconds--on firm ground.

"Open the ramp! Begin landing."

The exit of the naval infantry from the hold resembles an illustration for "The Hunchbacked Horse": out of the mouth of this tank-easting

monster, swim the swallowed tanks. No one is shooting. They did not wait for us. The battle will be in front--in the rear of the "southerners".

The blades of the fans again begin to cut into the grey baltic air. The landing ships, splashing the waves, speed out to sea.

In the evening when the "TROIKA" has settled on the concrete slab, Delyusin descended to his cabin. In a little glass made of a trimmed shellcase, he placed three green heads of grass and black-velvety reeds.

9355
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NAVAL TRAINING: LONG CRUISE ACTIVITIES DESCRIBED

Moscow VOYENNYYE ZNANIYA in Russian No 11, Nov 79 signed to press 8 Oct 79 pp 12-13

[Article by Rear Admiral V. Kozlov: "At Various Latitudes"]

[Text] Having cast off from hospitable Havana two hours earlier, the course for our ships was laid for the open sea. The spray from the ocean waves will be splashing over the majestic accompanying destroyers in the native Baltic following the completion of the friendly visit. For five days the citizens of Havana played host to the Soviet navymen, and although the period was short, both sides were very pleased with this meeting.

There will be something to talk about during the homecoming, if it is remembered that before the stop in Cuba the detachments of ships had completed a long cruise. But now, the measured pace of shipboard life enters into its own right. Part of the crew--the watch--is operating the machinery and systems. The remainder, having boisterously collected on the quarterdeck, (the forward part of the upper deck) are making use of the break before the noon meal and are enjoying exchanging impressions of the visit.

Scrutinizing the tanned faces, I involuntarily remember my own youth in the fleet, and I envy these lads who at 19-20 years of age have already sailed in many seas, have crossed the Atlantic Ocean more than once and have become familiar with several countries and their peoples. As ambassadors of the country of the Soviets, these young men arrive in navy uniform in the ports of various countries, demonstrating not the force of weapons but the Soviet people's love of peace and friendship.

But you know, only 20 years ago such ocean cruises were very rare for our sailors. Following the war, ships were, in general, limited to coastwise cruises. Our modern fleet is a different matter. It has indeed become oceanic and long range--that is now the norm.

By reflections were broken by the laughter of a young group of sailors who were standing next to the deck edge (a place on the ship outfitted for smoking). My attention was attracted to a broad-shouldered lad who was

wearing a brilliant white jumper with the chevrons of a P.O. 2d Class, and black trousers embroidered in the modern fashion. He was relating something amusing. Traditional fleet humor is alive, I thought, having moved closer to the group. It turns out that the petty officer, in a humorous manner, was relating an incident when a language barrier had caused him problems at the beginning of a conversation he had started up with a young lady--a Havana University student. The English language, which the petty officer had learned during the cruise was difficult for the Cuban to understand and, to make up for it a little late, they were speaking in Russian.

"Now it will be necessary to study Spanish," noted one of the sailors, "we have some new friends."

I observed that at the initiative of the ship's Komsomols, circles were organized for the study of foreign languages, for which nearly all the sailors had signed up.

The time came for the noon meal. Having descended along with the seamen and petty officers to the ship's mess hall, I again saw that this compartment and the meal itself in many ways are different from those which I was used to in my earlier years of fleet service. Tables for a few men. On the menu--appetizers, rich borsch, fleet macaroni and a compote. For dessert, tropical fruit of the most exotic variety are now most common on the seamen's table. In the right corner of the messing compartment next to the bookcase and chess table was placed a color television, the present of the chiefs of the Leningrade plant imeni Kuzitsky. The regular black and white TV set, in this case, had found a place in the crew's quarters.

A special device of the aft bulkhead held the rolled-up portable movie screen. At the start of the cruise, the films are set up on a choice basis, but by the second month of the cruise they were being seen for the second and third time. In the ship's cultural equipment there is a good library, several tape recorders, record players, various musical instruments and table games. The ship's amateur variety orchestra is very popular with the crew, and the favorite sports are not forgotten. For them, there is an improvised sports hall with a deck mat, side horses and rings for gymnasts and all the accessories for weight lifters, who are clanging with the discs of the crossbars and weights. During their period of service, young lads are changed into strong muscular seamen who are not frightened by any burden or storm.

On the command, "Commence specialist training," resounding across the ship, I proceeded to the main control center--the ship's central post, where control of all its complex equipment is concentrated. From here various automatic devices and instruments transmit orders and commands converted into special signals to the control stands for the control of machinery and weapons.

Greenish indicators, blinking little instrument lights and backlighted screens and scales weakly illuminated the concentrated faces of the operators bending over them. It seems that there was no order in the variously

voiced reports and orders passing through the communication and information equipment. However, this is not so. The necessary information reached the intended operator and the needed instrument or automatic device in a timely fashion. The usual tense combat exercise proceeded. By the work of the operators, one could feel that these were not novices and that they knew their business; but of course, that's what a training session is needed for, to develop the specialist's skills until they are automatic and to train them to operate confidently and harmoniously under any conditions. I know how much is necessary from my own experience. Repeatedly, it fell to one seamen to continue to service equipment and to carry on the struggle for the ship's survival during combat damage in smoke and heat and during flooding.

The training continued. There were plenty of air and surface targets around us. Two seamen worked in a strained fashion at the dim board, and I recognized one of them as the previously-noticed happy storyteller. The P.O. 2d Class and his assistant, already changed into similar clothes, the so-called tropical uniform, well-adapted to the hot and humid climatic conditions, quickly marked the bearing and range and carried out necessary decisions. The work proceeded skillfully. The P.O.'s helper, by appearance still a young seaman, also strived to perform accurately although he did not always achieve it.

After the ship's signal, "Know off training," I became acquainted with P.O. 2d Class Yuri Garnov. He told about himself:

I was called up after graduating from the Kherson DOSAAF naval school where many studied and acquired training in their future specialities. But, I first saw the sea when I was 14 years old. From that time on a daydream concerning the fleet was kindled.

After my service, I intend to continue to study my specialty. What do you remember best after the years of service? To answer right off is difficult, and after two years I have seen much, learned much and have found new comrades. Many romantic notions about the sea and ocean, acquired in childhood from books, have now been made real. I have crossed two oceans and several seas; I have already visited two continents and have seen a number of countries.

Listening to the petty officer, I automatically liked him--a thorough lad both in conversation and work. Such lads have always attracted me, ones not dejected in work, serious, tanned and weatherbeaten. One can see through them that 3 years of fleet service really is a school for manhood, character formation, physical and moral hardening and also a school for the facts of life and professional training.

Yesterday's rural and city lads, just off the school bench, having acquired a fair-sized work record are finding themselves in shipboard conditions different in many respects from the usual. Shipboard life and the whole rhythm of fleet service are determined by a special routine. They arise all at the same time, have morning calisthenics, straighten up the compartment themselves and carry out their duties (They service machinery and equipment which is allotted to them). On all ships a special cult of cleanliness has been established.

At sea all this is found in the form of the underway shipboard life: One group stands watch, another trains, and a third works at their specialty. There are no nursemaids at sea. The seamen do everything themselves. This is why parents are pleasantly surprised by the neatness of their son home on leave and in his readiness to help around the house.

But, if one considers that on the ships there are several dozen specialties, which the seamen and petty officers acquire during the years of service, with high skill, right up to the rating of master, then it becomes clear why service in the army or in the fleet is called a professional training school.

Before our departure for sea, the ship's crews were increased by recruits. I was a witness to the making of these sailors, who had taken the first timid steps along the deck and who are gradually finding self-sufficiency. Of course, it was not easy for all to master the rhythm of shipboard life, lacking in the necessary knowledge and experience and having to get used to the ocean with its measured swells and frequent storms.

On the cruise days quickly come and go and the effects from what has been seen is so much that there remained no place for a minute of the blues or the doubt - "Am I up to it?" The knowledge received at the naval school and the training detachments proved immediately useful, and the precise shipboard rules and the feeling of fellowship forced one to catch up and not lag behind the others. During studies and training, the desire to display your own firmness appeared more often and more quickly, the quicker to achieve confidences in actions.

It was obvious that in these young seamen, who not long ago put on the unaccustomed uniform--blue shorts, loose-fitting short-sleeved shirt and a fore-and-aft peaked cap--shyness had gradually disappeared, and, even on the cruise, a special "naval tenacity" had begun to appear and with it a feeling of being at home with the sea.

Suddenly, the majority of the recruits were already able to stand machinery watches by themselves, and during the ship's port visits, having gone ashore, they emphasized with special dignity, their belonging to our Soviet motherland.

The long cruise was nearing completion. It was still necessary to cross the Atlantic Ocean, transit the English Channel and the North Sea. And how interesting to talk with the seamen--thousands of miles and various ports lay astern. The ships had departed on the cruise when there was still blue-white ice in the channel, and now it was almost fall. The cruise really turned out to be long in distance and took a long time. The crew had passed the next test for maturity and combat training. This new group of young seamen could not be shaken, having matured and become seasoned sailors during the months of the long cruise, having become intimate with the ocean.

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SOVIET COMMENTS ON WESTERN MOBILE MISSILE LAUNCHERS

Moscow VOYENNYYE ZNANIYA in Russian No 11, Nov 79 signed to press 8 Oct 79 pp 44-45

[Article by K. Dolgov, candidate of technical sciences. "Against Low-flying Targets"]

[Excerpts] Abroad, mainly in the NATO countries, urgent work is in progress on the creation of new short-range mobile anti-aircraft missile systems (ZRK).

In the opinion of foreign specialists, short-range mobile ZRK's must provide high probability of hitting air targets under any weather and other conditions; have a short reaction time (the time from target detection to missile launch); be in continuous battle readiness and have high mobility, that is, maximum speed, a reserve of speed, the ability to overrun obstacles and be bouyant; have improved equipment for the detection and identification of air targets; and require minimum time to shift from the march to a combat condition. Additionally, ZRK combat operation must be comparatively simple and series production as inexpensive as possible.

Recently in the armies of the leading capitalist countries, systems have been created or are being developed which, in varying degrees, satisfy the indicated requirements. The CHAPARRAL (US), ROLAND (France and FRG), CROTALE (France) and RAPIER (Great Britain) are considered to be the most improved ZRK's among them.

Despite the diversity and different constructions of modern mobile ZRK's, the scheme of their operations for striking targets is essentially the same: detection, identification and selection of the target, determination of the moment to fire and the timely firing of the anti-aircraft guided missile (ZWR), missile guidance and target intercept.

By the evaluation of foreign military specialists, the ZRK systems indicated above still do not completely provide cover for troops on the march or on the battlefield because they lack mobility and have relatively long reaction times--usually about 10 seconds. Therefore, they consider it necessary to modernize existing and create new systems.

Attempts are being made to combine, on one self-propelled chassis, all the combat elements of a ZRK. For example, as it was reported in the foreign press, for the purpose of improving the mobility of the British RAPIER system a new self-propelled firing installation is being developed to be mounted on a tracked armored transporter. Thus, in order to broaden the systems combat potential, a new radar (BLINDFIRE) can be installed, as part of a standard armored transporter M113, providing day and night operations. The time required to bring the ZRK to combat readiness after halting is approximately 30 seconds.

The reaction time for ZRK's designated to combat low-flying aircraft and helicopters, must be less than for systems striking targets at medium or high altitudes. In foreign long-range models, the possibilities are being investigated for reducing the reaction time at the expense of modernizing the equipment used to control the missiles initial flight, and the construction of mechanisms for aiming the firing installation and others.

Significant attention during the creation of new ZRK systems, is being paid to the improvement of target detection equipment, guided missiles of reduced weight and size, and also improving their reliability and obstacle defense.

Thus, the strivings of the armies of the capitalist countries, in particular the NATO countries, to continue the arms race and to obtain a military advantage is becoming apparent in the creation of new ZRK's.

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DOSAAF TRAINING: AWARD DELAY CRITICIZED

Moscow VOYENNYYE ZNANIYA in Russian No 1, Jan 80 signed to press 10 Dec 79 p 33

[Article by M. Zolochevskiy, special correspondent: "They Made Their Decision... and Forgot about It"]

[Text] The story we will be relating here began more than two years ago, on 24 September 1977, in the city of Sverdlovsk of Voroshilovgradskaya Oblast. It was on that day that a session of the presidium of the city DOSAAF committee heard a report by I. L. Kalashnikov, chairman of the primary defense organization of secondary school No 12, concerning military patriotic indoctrination of young people and elementary military training for secondary students. It should be observed that the report was preceded by a thorough, rigorous check of the work of the school military instructor and chief of the DOSAAF collective, which made it even more gratifying for Ivan Leont'yevich when he learned of the decree of the presidium of the city committee:

"Summarize and disseminate the working know-how of Comrade I. L. Kalashnikov, chairman of the primary DOSAAF organization at school No 12, among all school DOSAAF organizations in the city.

"Submit the name of Comrade I. L. Kalashnikov for the award of Badge of Honor of USSR DOSAAF for his successes in military-patriotic indoctrination and elementary military training for students."

The veteran of the Great Patriotic War, a former fighter pilot who had received numerous government awards earlier, was pleased that his efforts and hard-working attitude toward the job he loved were receiving the attention and commendation of the leadership and being offered as an example for others.

Kalashnikov's colleagues and acquaintances received this news as fitting and proper: he certainly deserved it as much as anyone, they felt. After

his discharge into the reserve Ivan Leont'yevich became a military instructor and head of a primary DOSAAF organization; from that time forward his school invariably was the leader in the city for organization of military-patriotic propaganda among secondary students, organization of the Zarnitsa and Orlenok military sports games, and preparation of pre-draft youth for service in the Armed Forces.

Seven months passed after the session of the presidium before Kalashnikov resolved to remind A. Konoplev, chairman of the Sverdlovsk City DOSAAF Committee, that the award had not come.

"What can I do," Konoplev said, spreading his hands in a gesture of helplessness and despair. "It is being delayed higher up. We always have this kind of confusion with these awards. Sometimes we wait for years."

The retired major, who was accustomed to order and a responsible attitude toward work, was offended by this careless attitude toward duties on the part of the unknown office workers, and he reported the red tape problem to VOYENNYYE ZNANIYA.

In response to an inquiry from the editors of the newspaper the Voroshilovgradskaya Oblast Committee reported that "The question of awarding the Badge of Honor of USSR DOSAAF to Comrade I. L. Kalashnakov was not considered at the Presidium of the Sverdlovsk City DOSAAF Committee until April 1978 and the required papers for it were not filled out.

"The presidium of the oblast DOSAAF committee on 26 April 1978 reviewed the award papers presented for Comrade I. L. Kalashnikov and submitted a petition to the Presidium of the Central Committee of Ukrainian SSR DOSAAF to award him the Badge of Honor of USSR DOSAAF."

Upon receiving this answer the editors, of course, wondered who was lying. Was it Kalashnikov making reference to a session of the presidium which did not take place, or was it the oblast DOSAAF committee which did not check on the facts presented in the letter? But ultimately we decided to let the matter drop, secure in the knowledge that Kalashnikov, certainly a worthy candidate, was now presented for the award and, if the oblast committee made a mistake, certainly everyone does that sometimes.

Another 18 months passed, but I. L. Kalashnikov, now no longer chairman of the primary DOSAAF organization at school No. 12, but rather at Sverdlovsk Secondary School No 1, still had not received his award. So I was sent to Sverdlovsk, a small, cordial mining city. The chairman of the city DOSAAF committee was ill, and I had to delve into this confusing story of the delayed award with a young woman working as an instructor.

So, 18 months later, who was correct: Kalashnikov or the oblast DOSAAF committee? It was Kalashnikov. All I had to do to find out was to

look through the file of minutes of sessions of the presidium of the city committee for the last two years. I found No 18 of 24 September 1977, which said "After hearing and discussing a report by Kalashnikov, chairman of a primary DOSAAF organization," and so on. Ivan Leont'yevich had reported everything correctly in his first letter. But the Voroshilovgradskaya Oblast DOSAAF Committee was correct in saying that award documents for Kalashnikov were not filled out at the city committee until April 1978. In that case, why did A. Konoplev have to throw the guilt for the red tape on higher authorities? Of course, no one likes to put himself in an uncomfortable situation. "Factors beyond my control" is a very easy excuse. But why did the city DOSAAF committee for a period of seven months until the intervention of the editors and oblast committee fail to carry out the decision of its own presidium? This was the question I asked A. Konoplev, chairman of the Sverdlovsk City DOSAAF Committee, to answer.

In his talk with me, however, Aleksandr Lavrent'yevich drew attention away from his own omission and complained about the members of the presidium, who had informed Kalashnikov of the decision to award him the Badge of Honor.

"It is not supposed to be done that way," Konoplev explained. "The award process is a prolonged matter. While the papers are making their way to the oblast committee, from there to Kiev, from Kiev to Moscow, and then back, the situation may very well change."

"Did it change in this case?"

"That is hard to say," Konoplev said, avoiding a direct answer.

I checked and found that during this time I. L. Kalashnikov had not done anything wrong. He continues to work almost as well at the present time. After moving to school No 1, he brought it into the ranks of the leaders for all indexes of military-patriotic, mass defense, and sports work, just as he had done at school No 12. In just one year the DOSAAF organization he headed received 14 certificates of honor and diplomas.

The school has interesting ways of conducting the Zarnitsa and Orlenok military sports games, lessons in courage, meetings with veterans of the Civil and Great Patriotic wars, special evening discussions on pre-draft topics, and competition in applied military and technical sports events. Under the leadership of Ivan Leont'yevich, reconnaissance and pathfinder work has become widespread and young DOSAAF Members have assumed sponsorship relations with war invalids and aged veterans of labor. With their own hands his students set up what is now one of the best military offices in the city, a 50-meter enclosed rifle range, an obstacle course used for the Ready for Labor and Defense multiple event competition, a drill training area, and a guard post.

"Well alright, Aleksandr Lavrent'yevich, you forgot to make out the award document for Kalashnikov in the fall of 1977. But in the spring of 1978, when he reminded you of the presidium's decision, couldn't you have corrected the mistake?"

"How can I explain to you?" Konoplev answered. "The decision of the oblast committee was adopted a little late, and the Badge of Honor still has not come."

Indeed, it must be admitted that Kalashnikov still has not received the award promised to him more than two years ago. And Konoplev is not in fact responsible for 18 months of this time. But who is? This was the question I addressed to P. Lysenko, deputy chairman of the Voroshilovgradskaya Oblast DOSAAF Committee.

"We are not involved in this problem," he answered with conviction. "Here are the papers. On 26 April 1978 a session of the presidium of the oblast committee was held and on 16 May the award papers for Kalashnikov were sent to the Central Committee of Ukrainian DOSAAF.

"What could I do? Travel to Kiev? The time for my assignment was running out. So I decided to continue the search for the missing award from the other end. I returned to Moscow and called Ye. Pidiforova, an employee of the personnel department of the Central Committee of USSR DOSAAF.

"What was that name," Yekaterina Ivanovna asked. "Kalashnikov, Ivan Leont'yevich? Yes, we received the award papers for him from Kiev in early August two years ago, and on 18 October, immediately after ratification, sent out the Badge of Honor itself and certification."

I called Zh. Sherkevich, chief of the personnel department of the Central Committee of Ukrainian DOSAAF.

"Zhan Ivanovich, in late October 1978 you received the Badge of Honor of USSR DOSAAF for Ivan Leont'yevich Kalashnikov, didn't you?"

"Yes, we did."

"If it is not too much trouble, could you tell me what happened with it after that?"

"That is no trouble at all. I have my book in front of me. The Badge of Honor of USSR DOSAAF and certification sent in the name of I. L. Kalashnikov were turned over to I. Chumak, deputy chairman of the Voroshilovgradskaya Oblast DOSAAF Committee personally on 22 November 1978."

Thus the circle was closed. I again called the Voroshilovgradskaya Oblast DOSAAF committee.

"Chumak is not here now. He is off on a business trip," I was told by P. Lysenko. "But don't be upset. He will return tomorrow. Then we will check everything and make sure to inform you. Wait for our call."

That was it. I am still waiting for the promised explanation, just as I. Kalashnikov is waiting for his award. But Comrade Chumak will not deliver the news to me or to Kalashnikov. In this case perhaps the Voroshilovgradskaya Oblast DOSAAF Committee will answer for him and explain, finally, how such indifference could be shown to DOSAAF activists.

In conclusion I would like to cite one of the points in the socialist obligationsof the Voroshilovgradskaya DOSAAF Oblast Committee for 1979: "Execute documents and orders of higher-ranking organizations and carry out our own decisions in good form two days ahead of scheduled time." It would be interesting to know how Comrade Chumak squares this point with his careless attitude toward performance of his direct duties and failure to carry out the decision of the 3rd Plenum of the Central Committee of USSR DOSAAF entitled "The State of Work with Cadres and Public Activists in DOSAAF Organizations and Steps To Improve This Work."

[Afterword from editors] Cases like this of a careless, indifferent attitude toward means of encouraging activists, which are an important factor in continuing improvement of mass defense work, also occur in the civil defense system.

Here are two examples. S. G. Sharipov, civil defense veteran in Bugul'ma, Tatar ASSR, reported to us that on 25 March 1977 the city CD headquarters submitted the names of a group of activists to receive the award "Outstanding Civil Defense Worker of the USSR." The awards have not been given yet.

In June 1978 a demonstration comprehensive site exercise in civil defense was conducted in Nizhnekamsk, Tatar ASSR. Many of the participants received monetary prizes as incentives, while five of the most outstanding were submitted for the badge "Outstanding Civil Defense Worker of the USSR." It is 18 months later already, and they have not received their awards either. Every time people in the local areas ask employees of CD Headquarters in the Tatar ASSR they receive the same answer: "We do not have any badges available."

For an explanation the editors went to the CD headquarters of the RSFSR. We were told that "in 1978-1979 alone 650 of these badges were sent to the CD Headquarters of the Tatar ASSR. Therefore, the excuse that no badges were available was unfounded. The CD Headquarters of the Tatar

ASSR has been ordered to investigate these cases of carelessness in rewarding deserving persons and to take steps to prevent similar things in the future."

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PREDRAFT TRAINING: INSTRUCTOR PAY AND DUTIES

Moscow VOYENNYYE ZNANIYA in Russian No 1, Jan 80 signed to press 10 Dec 79 p 39

[Answers by V. M. Talalasov, chief of the Division of Labor and Wages of the USSR Ministry of Education, to reader questions: "The Military Instructor: Rights, Duties, Salary..."]

[Text] With the adoption of supplementary measures to improve elementary military training for secondary school students at general educational and pedagogical schools, the editors are receiving many letters in which readers ask about the legal status of military instructors, their working time, salary, and the like.

At our request, V. M. Talalasov, chief of the Division of Labor and Wages of the USSR Ministry of Education, responds to these questions.

[Question] Vladimir Mikhaylovich, what is the procedure today for setting up the position of military instructor at secondary general educational and pedagogical schools?

[Answer] Beginning in 1980 the position of military instructor will be introduced at secondary general educational schools regardless of the number of grades 9-10 (11) and at pedagogical schools regardless of the number of groups in which elementary military training is conducted.

[Question] What do the duties of a military instructor include?

[Answer] The Statute on Elementary Military Training of Young People and Point 17 of the Rules of Internal Labor Organization for Employees of General Educational Schools of the USSR Ministry of Education System give the following duties to the military instructor of a school:

organization and conduct of elementary military training periods envisioned by the program, during and outside of school hours; leadership of groups to study the fundamentals of military affairs; management of the military office and improvement of training facilities for elementary military training and civil defense; keeping track of and conserving weapons, ammunition, and military equipment in conformity with special instructions; military-patriotic indoctrination of students, including methodological direction of the Orlenok and Zarnitsa military sports games; cooperation with a physical training teacher in preparing students for testing and administering tests to them in the standards of the Ready for Labor and Defense test concerning wearing the gas mask, shooting, and throwing grenades, and conducting a military sports festival at the school; giving aid to teachers working on civil defense with students between the second and fifth grades; maintaining essential ties with the rayon (city) military commissariat, civil defense headquarters, DOSAAF committee, sponsoring military unit, and MVD division (for storage of weapons) and participation in the organization and conduct of rayon (city) competition in shooting, military technical sports, and civil defense; organizing the training of medical teams; helping the school leadership in the organization and conduct of civil defense activities.

[Question] Can a military instructor at a school perform administrative duties or the duties of a class leader?

[Answer] No, this is not envisioned under current legislation.

[Question] Are military instructors called on for watch duty at the school?

[Answer] Yes, they are.

[Question] How long is the military instructor's working day?

[Answer] The military instructor has a seven-hour working day and 41-hour working week.

[Question] Tell us, please, how the salaries of military instructors are determined.

[Answer] Beginning in 1980 the salaries of military instructors at secondary general educational schools will be set in the manner and amounts envisioned for deputy school directors in charge of educational work, while at pedagogical schools they will be set according to the procedures and amounts established for the director of physical training.

The amount of salary is also determined by the number of students at the school.

The salary of military instructors includes payment for 12 hours of pedagogical work a week at the schools and for 480 hours of pedagogical work a year at the pedagogical schools. If the military instructor does less pedagogical work than this, he is paid his full salary.

[Question] What does the pedagogical work of a military instructor involve?

[Answer] The pedagogical work of a military instructor involves conducting classes (some of them outside school hours) in elementary military training and civil defense and holding field exercises with ninth grade boys (30 hours a year or 0.85 hours a week for all ninth-grade classes). This kind of pedagogical work done by a military instructor for more than 12 hours a week (480 hours a year) receives supplementary pay on the same principles used with teachers for actual number of hours given.

[Question] Does time spent directing study circles in the fundamentals of military affairs and managing the military office come under supplementary pay?

[Answer] No, there is no supplementary pay for this work.

[Question] Are military instructors authorized to conduct classes in other educational subjects?

[Answer] Military instructors can conduct classes in other subjects, and receive supplementary pay for this. But the total of pedagogical work subject to supplementary pay cannot exceed 12 hours a week (480 hours a year).

[Question] Could you please explain to us how and when elementary military training teachers are offered pedagogical work at the school?

[Answer] It is permitted to invite an elementary military training teacher to regular and pedagogical schools for pedagogical work if the teaching load of the military instructor, owing to a large number of parallel classes (training groups), exceeds the set norm of hours. With the agreement of the military commissariat the best trained reserve officers, specialists from enterprises, establishments, and organizations, and teachers from the particular school may be enlisted to conduct military-technical training periods. Classes for girls who are members of medical teams may be conducted by medical employees selected and recommended by local public health agencies and by teachers who have gone through training in the reserve nurse program. During such training periods the classes are divided into groups of young men and women. The teaching load of the military instructor is not reduced in this case.

[Question] How are teachers of elementary military training paid?

[Answer] Pedagogical work in elementary military training performed by teachers and other employees of the particular general or pedagogical school is compensated by the procedure established for teachers. Specialists from enterprises, institutions, and organizations who are enlisted to teach elementary military training receive an hourly wage.

[Question] Is there a difference between the pay of military instructors at rural and urban schools?

[Answer] No, there is no such difference.

[Question] Does the hourly wage, if some of the elementary military training sections are taught by specially enlisted teachers, depend on education and years of teaching experience?

[Answer] The amount of the hourly wage depends on education and years of teaching and is determined by dividing a monthly salary set for 18 hours of teaching work a week by 76.2 and dividing the salaries set for 41 hours of work a week by 173.1.

[Question] Do persons working on hourly wage receive pay during vacation time?

[Answer] Persons working on hourly wage who do not conduct training periods during vacation time are not paid for this time.

[Question] Can a military instructor work at two schools at the same time?

[Answer] The military instructor does not have the right to hold a regular position simultaneously at two schools. The military instructor is authorized only to conduct the allowed 12 hours of teaching a week at a second school.

[Question] What are the procedures for paying pensions to military instructors?

[Answer] Reserve officer-pensioners who are working as military instructors receive a full pension regardless of wages earned. The type of pension support is unimportant here. Those military leaders, retired officers and pensioners of the USSR Ministry of Defense who were transferred to retirement after 1 December 1970 also enjoy the right to receive a pension without consideration of wages while they are employed as military instructors. They keep this right as long as they are employed continuously in this position.

[Question] Could you please tell us what material support military instructors receive when they are sent to monthly training assemblies?

[Answer] During their time at the training assemblies military instructors receive a per diem allowance of one ruble 30 kopecks (regardless of salary), a lodging payment of 80 kopecks a day, plus the cost of travel to and from the place of the assembly. For time spent en route a per diem allowance is paid in conformity with laws on work trips. The lodging allowance is not paid when the instructors receive dormitory quarters free of charge. During the entire period of the official trip to the training assembly military instructors from regular and pedagogical schools keep their wages at the primary place of work.

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MISSILES: COMMENT ON U. S. DEVELOPMENTS

Moscow VOYENNYYE ZNANIYA in Russian No 1, Jan 80 signed to press 10 Dec 79 pp 42-43

[Article based on foreign press reports by Lt Col-Eng Ye. Klimovich and Lt-Eng S. Bukharov: "Strategic Missiles"]

[Text] Late in World War II Hitler's Germany was the first country in the history of warfare to use ballistic missiles, which it fired at England. These were the VAU-2 missiles, which had a liquid-propellant rocket engine that operated on ethyl alcohol (fuel and liquid oxygen oxidizer).

The rocket had a length of 14 meters, a launching weight of 12.9 tons, a range of action of 290 kilometers, trajectory height of 86 kilometers, and maximum speed of 5,700 kilometers an hour. It delivered its warhead, one ton of explosives, with an all around probable error (radius around the target where the hit probability was 50 percent) of 10-18 kilometers. The technical reliability of the VAU-2 rockets was fairly high, 60-70 percent. They did not, nor could they, save the Third Reich from its inevitable collapse. Nonetheless, despite their flaws and comparatively modest combat capabilities, the appearance of ballistic missiles marked the creation of a fundamentally new means of armed combat.

What kind of missiles do we call ballistic? Ballistic missiles are those which, with the exception of a fairly short active segment, perform their flight along the trajectory of a freely propelled body.

Ballistic missiles are subdivided by type of engine used into liquid propellant engines, solid fuel engines, and hybrid forms which use solid fuel and liquid oxidizer. Missiles with liquid propellant and solid fuel have been most common.

By designated work missiles are subdivided into tactical, operational-tactical, and strategic. In the opinion of foreign military

specialists, strategic ballistic missiles are today considered the most promising and effective means of delivering nuclear warheads to targets.

The rapid development of this type of weapons since the war was a result of their extraordinarily great combat potential. Strategic missiles today have practically unlimited firing range. In combination with the possibility of maneuvering by trajectory, this makes it possible to strike virtually any point on the earth's surface. They can also be used regardless of meteorological conditions, season, and time of day. The targets of strategic missiles are large troop groupings, missile launch positions and bases, airfields, strategic weapons storehouses, key communications centers, large administration and industrial centers, air and naval bases, and the like.

The missile in flight is usually controlled by autonomous systems. The instruments are basically mounted on the final stage of the missile, while the actuating elements (most frequently vernier rocket engines) are mounted on each stage of the missile. The missile is launched vertically, which allows it to pass through the dense layers of the atmosphere quickly.

The nose cones of strategic missiles are usually loaded with nuclear warheads and may consist of one block or several nuclear warheads. In this case the warheads separate at a definite point in space according to a preassigned program and each of them continues flying on an independent trajectory. In this way, one missile hits several targets.

Strategic missiles are subdivided into intercontinental (with a range of 5,000-10,000 kilometers and more) and intermediate-range (with a range of 2,000-5,000 kilometers) missiles.

The first models of strategic ballistic missiles appeared in the United States in the late 1950's. The Jupiter and Thor intermediate-range missiles and the Atlas intercontinental missile were adopted in 1957-1960. Their basic specifications are given in the table [not included in translation].

German experts who had developed the VAU-2 during World War II had a leading role in designing the Jupiter missile. It is equipped with a liquid-propellant engine with a thrust of about 70 tons and works on liquid oxygen and kerosene. The single-stage Thor missile has a liquid-propellant engine that develops up to 72 tons of thrust. The two-stage Atlas intercontinental missile is equipped with three liquid-propellant engines and creates about 175 tons of thrust.

During the 1960's the United States adopted the Titan-2 and Minuteman-1 intercontinental ballistic missiles and the submarine-launched Polaris and Pose'don intermediate-range missiles.

The two-stage Titan-2 has a liquid-propellant engine and nose cone with a nuclear warhead having the TNT equivalent of 4-10 megatons. At launching the missile may be located in an underground launcher. It takes 1-2 minutes to prepare the missile for launching. A self-contained inertial control system insures that the nose cone will strike the target with an all-around probable error of 2.5 kilometers. American military experts believe that this missile can be used to knock an artificial earth satellite out of orbit.

The Minuteman ballistic missile is proposed for use against important enemy strategic installations at ranges up to 11,000 kilometers. This is a three-stage missile with solid-fuel engines and a nose cone that is detachable in flight. Several modifications have now been developed. The warhead of the Minuteman-1 has a nuclear charge with a TNT equivalent of 0.6-1.5 megatons. The inertial control system insures an all-around probable error of 1.2-1.6 kilometers from the target at maximum range.

The Minuteman-2 missile has a more powerful nuclear charge and greater accuracy. It is equipped with means of overcoming anitmissile defense. The memory unit of the onboard computer of this intercontinental ballistic missile stores data on eight targets, and the missile may be launched against any of them. Launch preparations take about 30 seconds.

The Minuteman-3, adopted in 1970, is a three-stage solid-fuel missile stored in an underground shaft. It has a nose cone that separates into three individually guided warheads of 200 kilotons apiece. According to the foreign press, this intercontinental missile can destroy several targets hundreds of kilometers from one another or deliver several strikes against the same target. After the nose cone is separated from the final stage of the rocket, the control system and engine carry out a precalculated maneuver to insure that the first warhead strikes the target. After it has separated the nose cone performs a new maneuver to guide the second warhead, and so on. When the final warhead has separated, the flight trajectory of the body of the nose cone changes to interfere with the antimissile defense system and then the body comes apart, creating several dummy targets.

To support operations and combat use the Minuteman intercontinental ballistic missiles are grouped in detachments, each of which includes 10 missiles in shaft-type launchers. Five detachments form an intercontinental ballistic squadron, and 3-4 squadrons make up a base (wing). The launch may involve one missile, several, or even all the missiles of the base simultaneously.

The two-stage solid-fuel Polaris intermediate-range ballistic missile was adopted by atomic submarines (16 missiles per submarine). These missiles are capable of hitting targets at ranges of 2,500-4,600 kilometers. There are several modifications, the Polaris A-1, Polaris A-2, and Polaris A-3; they differ chiefly by range and power of warheads. The Polaris missiles can be with the active fleet without repair for several years (until the atomic fuel is entirely used on the submarine). The atomic submarine is a kind of mobile launcher for them. It has significant traveling speed and the ability to submerge to great depths.

Since 1973 the United States has been working on the new MX intercontinental ballistic missile which is expected to be adopted in the mid-1980's and will possibly replace the Minuteman missile. The foreign press reports that the latest advances of science and technology in the fields of rocket fuels and guidance systems, as well as new design concepts, are being used in development of the MX missile. It is also reported that the missiles will be installed in existing Minuteman silos.

Several alternatives for basing MX missiles are being considered to increase their survival potential. Foreign experts prefer locating the missiles in vertical silo launchers; there would be 10-20 times as many silos as missiles. It is suggested that the missiles be moved secretly from silo to silo by special multirail launcher-conveyors, which would make their detection extraordinarily difficult. This variation is called the system of "dispersal or multiple targets." The foreign press also reports other alternatives. For example, there is the "air-mobile system" which contemplates mounting the missiles on special platforms in C-5 military transport planes. When necessary they can be moved by air to bases from which the missiles will be launched one hour after the plane lands. There is also a variation that envisions launching the missiles from specially designed aircraft.

The United States is developing the Trident system to replace atomic submarines with Polaris and Poseidon missiles. The press reports that the new submarines, which are 170 meters long and displace 18,700 tons of water, will be armed with 24 intercontinental ballistic missiles with eight warheads apiece.

These facts are convincing evidence of the serious threat to the cause of peace that is represented by the new round in the arms race. Despite the process of poltical détente, for which the Soviet Union and fraternal socialist countries are fighting hard, physical preparations for war continue in fact. Therefore the fighting men of the USSR Armed Forces stand vigilant guard over the peaceful labor of our people and are always ready to repulse any aggressor.

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SURFACE-EFFECT VEHICLES: DEVELOPMENTS DISCUSSED

Moscow VOYENNYYE ZNANIYA in Russian No 1, Jan 80 signed to press 10 Dec 79 pp 44-45

[Article based on foreign press materials by Capt 1st Rank-Eng N. Korytov, candidate of technical sciences: "Surface-Effect Craft Fly above the Sea"]

[Text] In the search for more effective naval weapons imperialist strategists in recent years have devoted considerable attention to a new amphibious flying craft, the surface-effect vehicle [in Russian "ekranoplan," literally "screen plane"]. It appeared as the result of theoretical and experimental studies of the movement of a wing near the surface of a screen. These studies showed that the lift of a wing increases significantly at lower flight elevation, and drag is reduced. As a result, the efficiency of the wing increases, the aerodynamic qualities of the flying craft are improved, and it becomes more economical.

Let us explain the essential points.

The chief factor affecting the aerodynamic characteristics of a wing in movement near a support surface (screen) is change in the nature of flow around the wing compared to a wing moving in an unbounded flow. Because of the intensive braking of air between the wing and the screen, the pressure on the lower (pressure) surface increases while the underpressure on the upper (suction) surface rises slightly.

We know from aerodynamics that most (about two-thirds) of the lift of a wing moving in an unbounded flow (for example the wing of a plane in cruising flight) is created by underpressure on the suction surface, while one-third of the lift is created by pressure on the pressure surface.

But when the wing is moving above a screen (for example, above the ocean surface) the increase in pressure on its pressure surface causes

a significant rise in lift. At very close distances to the screen the pressure under the wing may equal the velocity head of the air countercurrent, as a result of which the so-called dynamic air cushion forms. It is this that determines the aerodynamic lift.

The useful effect of the screen on the aerodynamic properties of the wing was the basis for surface effect vehicles.

Contemporary surface effect vehicles can be divided into two groups according to type of aerohydrodynamic layout, that is, the mutual arrangement of the primary aerodynamic and hydrodynamic elements (body, wings, floats, stabilizers and the like): vehicles made according to the "flying wing" scheme (see Figure 1 [not reproduced], and surface-effect vehicles built according to a pure airplane (fuselage) scheme (see Figure 2 [not reproduced]).

The "flying wing" type surface-effect vehicle has a wing-shaped body. It has supplementary carrying stabilizer planes. Among the advantages of this design is the possibility of making full use of the carrying properties of a slender wing, because it has no superstructures. The control booth, cargo area, and other spaces can be located in the body.

Most surface-effect vehicles designed in foreign countries follow the "flying wing" scheme.

On the surface-effect vehicles of the airplane type the wing is secured to a body (fuselage), which worsens its aerodynamic properties. With these surface-effect vehicles cargo areas and the compartment are placed in the fuselage. Contemporary surface-effect vehicles usually have slender wings. Special limiting "washers" are mounted on the ends of the carrying wing of the apparatus to increase the carrying properties when the vehicle is traveling near a screen and thereby to improve the flight performance of the entire surface-effect vehicle. These washers make it possible to reduce the flow of air from under the wing up through its ends and thus reduce wing resistance, which of course increases its list. On surface-effect vehicles designed as "flying wings," floats play the part of the terminal washers.

An important design element of the surface effect vehicle which significantly determines its operating performance and navigability is the launching apparatus, which should put the vehicle into the calculated near-surface flight regime by relieving and reducing resistance. Trailing-edge flaps and tiltable wings, hydroskis, and systems for blowing air under the body or carrying wing are used as such devices.

Considering the characteristic features of wing aerodynamics and the essential physical principles of movement of an apparatus near a screen, foreign specialists note the following advantages of the

surface-effect vehicle over other flying craft, hydrofoils, and air cushion vessels. Surface-effect vehicles can reach speeds of up to 200 knots (370 kilometers an hour) and more with relatively low power output, which greatly exceeds the traveling speed of existing and projected hydrofoils and air-cushion vessels. In addition to their great speed surface-effect vehicles have greater navigability. This is because they do not make contact with the water surface when traveling in the design regime and are able to change flight elevation in a fairly broad range depending on the size of waves.

Emphasis is placed on the excellent amphibious qualities and broad range of traveling regimes of surface-effect vehicles. By making an appropriate selection of aerodynamic and design layout it is possible to fly near the water or ground surface, travel outside the zone of influence of the screen, be in a water-displacing position (like conventional ships), emerge on shore, travel over snowy surfaces, and so on.

According to the findings of studies made by foreign specialists, the economic efficiency of a surface-effect vehicle increases with an increase in its dimensions. This means an increase in usable freight capacity and flight range and a decrease in specific power output (that is, the power per unit of mass of the vehicle).

The Finnish engineer T. Karrio built the first model of a surface-effect vehicle abroad in 1935. This small device served as the basis for the development of numerous larger surface-effect vehicles weighing up to 500 kilograms which were patented by the author under the name "ram wing".

Research and planning toward building surface-effect vehicles has been carried on recently in Japan, West Germany, France, and, with particular intensity, in the United States where several aircraft companies such as Lockheed and Douglas are working on the development and construction of experimental surface-effect vehicles.

The Japanese aviation company Kawasaki has been conducting studies on surface-effect vehicles made following the "flying wing" pattern since the early 1960's. Figure 3 [not reproduced] is a simple diagram of one of the latest modifications of this company's surface effect vehicle. It has a full weight of 690 kilograms and with the following elements: length — 5.88 meters; width (including stabilizers) — 6.14 meters; height — 1.65 meters. The basic units of these vehicles are a rectangular, slender carrying wing with lateral floats and a two-speed cockpit in the central part. The design of the vehicle envisions a tail stabilizer and a water rudder for course control. The suspended 80 horsepower engine with screw propeller drive gives the vehicle a speed of 85 kilometers an hour in design regime.

The surface-effect vehicles developed under the leadership of aviation designer A. Lippisch of West Germany occupy a significant place in

foreign work. Lippisch's planes, the X-112, X-113, and X-114 follow the airplane scheme entirely and resemble in appearance a conventional light hydroplane. For example, the X-112 (see Figure 4 [not reproduced]) has a well-streamlined fuselage-type body. The tips of the wings rest on floats which play the role of endplates. The vehicle has an airplane-type tail. It has a water rudder, which is retracted in flight, to make the vehicle controllable at low traveling speeds cruising in water. In tests the X-112 surface effect vehicle with a full weight of 322 kilograms has reached speeds of 120 kilometers an hour. Its maneuvering characteristics are satisfactory and flight stability is good at different elevations from the water surface. The X-113 surface-effect vehicle has reached speeds of 150 kilometers an hour in tests.

In 1977 the X-114, one of the latest modifications of Lippisch's surface-effect vehicles, was tested. It is designed to carry six passengers or 500 kilograms of freight with a cruising speed of 150 kilometers an hour in near-screen flight. The 205-horsepower engine, which drives a propeller in a head, provides a maximum speed of 200 kilometers an hour and the flight range of 100 kilograms of fuel is more than 1,000 kilometers. The X-114 has a retractable undercarriage and can also be operated like an airplane in free flight.

In France two airplanes have been developed for transport surface-effect vehicles capable of carrying 300 and 500 tons at a speed of 200 knots. They are designed for trans-Atlantic shipping from near-surface flight at an elevation of 10-12 meters. One of the plans is fully amphibious, while the other envisions an undercarriage for coming out on shore.

Foreign specialists believe that surface-effect vehicles, thanks to such properties as high traveling speed, amphibious performance, invulnerability to mines and torpedoes, and capability of flying at extremely low altitude which makes detection by ships more difficult, may be used as aircraft carriers, assault missile ships, and antisub, transport, and landing ships. Reports on more than 20 projects for different types of military surface-effect vehicles have been published in the press.

In conclusion it must be observed that building surface-effect vehicles requires solutions to numerous difficult technical problems. One of these is insuring stability of movement in near-surface flights. In the opinion of foreign specialists, the longitudinal stability of the surface-effect vehicle may be insured by various means: rational selection of the aerodynamic layout of the vehicle, with the use of an elaborate tail unit (stabilizer), and the use of means of wing mechanization. An elevation rudder or flaps on the primary carrying wing are used to insure horizontal stability. Another important problem is bringing the surface-effect vehicle to the design regime. In selecting the type of primary elements at the launching unit, the

characteristics of the general layout of the vehicle, its design features, and given operating conditions are taken into account in each concrete situation. In the opinion of specialists there must be further study on the aerodynamics of a wing moving near a screening surface and development of optimal propelling devices, and navigation systems that insure safe movement of the surface-effect vehicle in different regimes.

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CIVIL DEFENSE: TRAINING IN A LENINGRAD ENTERPRISE

LD111027 [Editorial Report LD] Leningrad LENINGRADSKAYA PRAVDA in Russian 26 February 1980 publishes on page 4 under the rubric "Reportage From Civil Defense Exercises" a 750-word S. Gritskov report entitled "'Do You Read Me, No 3?'" It describes civil defense exercises at the "Skorokhod" Association, which is "constantly among the winners of the socialist competition for civil defense in the rayon." The report deals with the training of radio operators, "on the speed, accuracy and coordination of whose work a great deal could depend," and the training of reconnaissance specialists. The author points out that "every member of a reconnaissance group must work confidently with radiation-monitoring instruments, orient himself instantly in centers of destruction and areas requiring rescue work, know how to use individual means of protection and be strong and hardy."

The report continues: "Exercises for radio operators and reconnaissance specialists are just part of the great, multifaceted civil defense work done in the association. The firm's management and social organizations show constant concern for strengthening the material and technical base of civil defense formations. Lecture cycles are conducted in all collectives, frequently right in the shops after work. Public-spirited instructors explain how to act under very different conditions, for example, under threat of attack or on evacuation, and how to give medical first aid." There are reportedly "many civil defense activists at 'Skorokhod.' Every Shop and every section has them."

CSO: 1801

MILITARY PENSIONS: NEW BENEFITS REVIEWED

LD071122 Moscow Domestic Service in Russian 0900 GMT 7 Mar 80 LD

[Text] The CPSU Central Committee and the USSR Council of Ministers have adopted a decision on additional measures to improve the material living conditions of participants in the Great Patriotic War.

Under the decision participants in the Great Patriotic War are given additional benefits. Invalids in the first and second groups are given the right of one free round trip by rail, or on vessels on transit and local routes of the river fleet each year. Invalids in the third group and family members living with them are given a 50 percent reduction in rent and a set payment for use of heating, water, gas and electricity, while those living in houses without central heating are given the same reduction on the cost of fuel up to the limits set for sales to the population.

Invalids in the third group are freed from payments of income tax on wages received, irrespective of their total.

For invalids in the first and second groups who held the rank of private and sergeant on regular and re-enlistment service as well as ensigns and warrant officers, the amount of invalid pension has been increased by 10 percent, within the limits set for maximum payments.

The minimum pension to invalids of the Great Patriotic War in the third group who were privates in the regular service will be raised from R33 to R40 per month. These benefits are extended to servicemen who became invalids as the reserve of injury, contusion or crippling received during the defense of the Soviet Union or in carrying out other duties in military service, or as a consequence of illness connected with service at the front, and extended to officials forming the front-line complement of the organs of the USSR Ministry of the Interior who became invalids as tne result of injury, contusion or crippling received in carrying out official duties.

It is recognized that it is essential to set a 50-percent reduction in income tax and the right for priority in housing for participants in the

civil war, the Great Patriotic War, and other military operations in defense of the Soviet Union, for servicemen who served in military units, staff headquarters and establishments which formed part of the regular army and the partisans.

The CPSU CC and the USSR Council of Ministers have recommended that the central committees of the union republican communist parties, kraykoms, obkoms and raykoms of the party, the councils of ministers of the union and autonomous republics, executive committees of soviets of peoples deputies, carry out a systematic review of granting participants in the Great Patriotic War the benefits and priorities determined by the law, and give constant attention to their needs and requests. The benefits set out above come into force on 1 May 1980.

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WESTERN MILITARY AIRCRAFT DEVELOPMENT TRENDS REVIEWED

LD281625 Moscow KRASNAYA ZVEZDA in Russian 16 Jan 80 p 3 LD

["Military-Technical Review" compiled on the basis of foreign press material by Maj Gen Engr A. Ponomarev, Doctor of Technical Sciences: "Combat Aircraft on the Threshold of the Eighties"]

[Text] In just three decades combat aircraft have become jet and missile-carrying aircraft. Even now they are developing rapidly. Militarist circles in the United States and other NATO countries, entertaining their aggressive designs, are making every effort to complicate the international situation and whip up the arms race. Confirmation of this is provided by plans recently announced in the United States for the implementation of extensive new arms programs and by the constantly growing military budgets of NATO countries.

The improvement of combat aircraft occupies a significant place in these military preparations. Suffice it to say that in the United States, for instance, several new types of planes and helicopters have been adopted in recent years or are about to be adopted. New combat aircraft are also being designed in West European countries, on a smaller scale but still intensively. Here a certain difference can be observed between American and West European aircraft designers in their approach to creating new machines.

Unlike in the recent past, the United States is now giving preference to special-purpose combat aircraft. Examples are the air superiority fighters of the F-14 and F-15 type and the F-18 and the F-16 air combat fighters. The A-10 close-support aircraft was constructed and adopted for the first time, and, finally, the B-1 strategic bomber was developed. It is true that for the fighters the special purpose designation is relative. They can supplement each other and carry out tasks jointly. Thus the F-15 and F-16 fighters are also entrusted with close-support tasks. The only highly specialized aircraft is the A-10.

In West European countries, however, they tend to construct multipurpose combat aircraft. Examples are machines such as the Tornado (FRG, Britain, Italy), the Jaguar light fighter-bomber (France, Britain) and the Alpha jet trainer and light assault plane (France, FRG). Mirage fighter-bombers are

constructed mainly in France in the hope of finding a market abroad, and in Sweden there is the Viggen, as an attack and interceptor plane.

It is characteristic that the commands of air forces in NATO countries strive to include in the combat pool a large number of aircraft with average technical characteristics and a smaller number of sophisticated, high-speed planes with better equipment. It is considered expedient to equip only crack units and subunits with the better and more costly machines, while the rest are equipped with models with less good characteristics, but which are relatively cheap to mass-produce.

In developing their aviation combat hardware the NATO countries take into account the experience of the war in Vietnam and in the Near East. In this connection it is considered that a maximum speed corresponding to Mach 2.5-3 is not necessary for a air combat fighter. For such a plane, priority significance is attached to such features as rate of climb, high angular velocity in a sustained turn, and acceleration, and also other flight characteristics necessary for modern air combat at speeds ranging from Mach 0.9 to Mach 1.7. Only the combined type of armament is envisaged for air combat fighters: guns and air-to-air guided missiles of various ranges.

People abroad had not given up attempts to create STOL and even VTOL planes. As yet the Harrier, which is made in Britain, remains the sole example of such a machine. According to foreign specialists, future machines of this kind will have to be supersonic, carry air-to-air and air-to-surface guided missiles and possess all-weather capability.

A great deal is being said in the foreign press to the effect that in the near future, thanks to the development of radioelectronic facilities, there will be remote-control combat aircraft not only for reconnaissance, but also in the role of bombers and fighters capable of carrying out flights with very high g-loads which are absolutely impermissible for manned machines.

The U.S. military political leadership regards strategic aviation as the most flexible element in the notorious triad, which also includes ground-based and sea-based ballistic missiles. The basis of the NATO countries' strategic aviation aircraft pool is made up of subsonic planes. These are mainly American B-52 bombers. Their speed does not exceed 1,040 km per hour. As is known, they have been in the armory since 1955. The B-52's range is 16,000 km. This plane can carry both nuclear bombs and air-to-surface missiles. The latest modifications of the B-52 have enhanced thrust engines. They are equipped with more powerful armaments and have a multibarrel Vulcan cannon in the tail turret and unguided rockets on forward mountings.

[LD281627] Apart from this basic aircraft, U.S. strategic aviation has adopted the F-111 supersonic bombers with wings whose sweepback is variable in flight. Like other American strategic aviation planes, they can be refueled in flight.

The Pentagon regards the B-1 supersonic bomber as a promising strategic aircraft. It is equipped with four turbofan jet engines located under the central part of the wing. The aircraft has wings whose sweepback is variable in flight.

The B-1's high altitude supersonic flight range, foreign specialists note, is not great in comparison with its low altitude range, which is up to 11,000 km. Speed on boost at an altitude of 11,000 meters, the foreign press reports, is up to 2,300 km per hour. As is known, a decision has not yet been adopted on the series production of the B-1 aircraft, but work on it is continuing. The Pentagon believes that if the B-1 is adopted it will become the main strategic aircraft for the next 10-20 years.

Despite the development of ground-based and submarine-based ballistic missiles, the U.S. strategic aviation command proposes in the next 15-20 years to develop a strategic ICBM-carrying plane. Discussion of this system, known as AX, began in the press after the experimental launch of a Minuteman-1 ICBM from a Galaxy C-5A military transport plane.

The construction of such a plane, foreign specialists note, gives rise to many serious difficulties. The necessary takeoff weight for such a missile carrier is too great. Moreover, questions of insuring the required missile guidance accuracy are complex.

A tendency has emerged abroad in recent years to use transport planes not only as servicing planes, but also as cruise missile carriers and radar patrol planes. For instance, the United States is counting on adapting a certain number of American civil aviation Boeing-747's for transporting military cargoes. Foreign observers suppose this to be due to the Pentagon's desire to have a larger number of transport aircraft for shipping troops and hardware to another continent so as to halve the time required for this in comparison with the existing time scale.

The National Aeronautics and Space Administration--NASA--has been enlisted in the United States, the foreign press reports, to carry out long-term aircraft armaments development programs. A special group has been set up there for the analysis and planning of the long-term development of aviation hardware. It has submitted a list of military aircraft recommended up to the end of the century. The list includes: a transport and refueling plane, a long-range reconnaissance and patrol plane, a large freight plane, a long-range rotorcraft and a VTOL-STOL fighter.

The further development of military aircraft will depend to a significant extent, foreign specialists believe, on how far it is possible to improve the technical flight characteristics of aircraft. However, as foreign specialists stress, the effect of such factors as the cost and reserves of fuel, and the plane's optimum activity cycle, which were formerly given little attention, are becoming particularly significant today.

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BRIEFS

POLITICAL INDOCTRINATION--Officers and generals of USSR civil defense staffs and directorates, and civil deveise staffs in the RSFSR, Moscow and Moskovskaya Oblast have held a scientific and practical conference devoted to problems of improving party political work in the light of CPSU Central Committee demands. The report was delivered by Col Gen V. Grekov, USSR civil defense political chief. The conference participants discussed questions of further improving the effectiveness of party political work in the USSR civil defense system and improving the style and methods of party organizations' activity in propagandizing civil defense among the population. The conference was addressed by army Gen A. Altunin, USSR deputy minister of defense and USSR civil defense chief. V. Lepeshkin, CPSU Central Committee deputy section chief, participated in the conference's work. [Text] [LD051409 Moscow KRASNAYA ZVEZDA in Russian 29 Feb 80 p 3 LD]

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USSR REPORT: USA: ECONOMICS, POLITICS, IDEOLOGY*

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